

What is claimed:

- 1                    1.        A billiard cue comprising:  
2                    a shaft having a wall with an outer surface between a first tip end and a  
3                    second end, a bore extending from the first tip end for at least a predetermined  
4                    distance along the length of the shaft toward the second end, the shaft having a wall  
5                    thickness of about 0.005 inches to about 0.050 inches between opposed ends of the  
6                    bore, the bore reducing the mass of the tip end to minimize cue ball deflection on  
7                    impact with the cue.
- 1                    2        The billiard cue of claim 1 further comprising:  
2                    the shaft formed of fibers disposed in a binder.
- 1                    3.        The billiard cue of claim 2 wherein the fibers are carbon fibers  
2                    disposed in an expoxy resin binder.
- 1                    4.        The billiard cue of claim 3 wherein the shaft is formed of a  
2                    material having a modulus of elasticity greater than or equal to  $4.3 \times 10^6$  P.S.I.
- 1                    5.        The billiard cue of claim 1 wherein the bore extends from about  
2                    4 to about 5 inches from the first tip end of the shaft.
- 1                    6.        The billiard cue of claim 1 wherein the shaft is formed of a  
2                    material having a modulus of elasticity greater than or equal to  $4.3 \times 10^6$  P.S.I.
- 1                    7.        The billiard cue of claim 1 wherein:  
2                    the shaft has a tip portion extending from the first tip end; and  
3                    the bore extending from the first tip end only through the tip portion of  
4                    the shaft.

- 1                   8.       The billiard cue of claim 1 further comprising:  
2                   a lightweight, non-structural material disposed in at least a portion of  
3       the bore.